IN THE SPECIFICATION:

Please replace the paragraph on page 1, beginning at line 4, with the following amended paragraph:

The present invention relates to a method of ~~measuring a~~ measuring the rotation of a sphere such as a golf ball or a tennis ball, and to a measuring device to be used for the measuring method.

Please replace the three paragraphs beginning on page 1, line 8 to page 2, line 7 with the following three amended paragraphs:

When a golf ball is hit with a golf club, it flies with a so-called backspin. The backspin is a rotation setting a horizontal direction orthogonal to a hitting direction (which will be hereinafter referred to as a "z direction") to be an axis. A lift acts on the golf ball through ~~the backspin, thereby increasing a~~ backspin, thereby increasing the flight distance of the golf ball. In some cases, the golf ball flies with a so-called sidespin. The sidespin is a rotation setting a vertical direction (which will be hereinafter referred to as a "y direction") to be an axis. The golf ball turns left (a draw ball for a right-handed golfer) or turns right (a fade ball for the right-handed golfer) due to the sidespin. Furthermore, the golf ball sometimes flies with a rotation setting a horizontal

direction identical to the hitting direction (which will be hereinafter referred to as an "x direction") to be an axis.

In order to diagnose a golfer's swing form, it is effective to ~~measure a~~ measure the rotating speed of the golf ball (which is obtained by measurement of a rotating angle). Moreover, it is also effective to measure the rotating speed in order to evaluate a golf ball or a golf club. In a stage in which the golf ball and the golf club are being developed, the rotating speed is inevitably measured.

U.S. Patent No. 2810320 has disclosed a measuring method of photographing a flying golf ball twice at a predetermined time interval in one direction (usually the z direction) and calculating each axial rotating angle from two static images thus obtained. According to the measuring method, three recognition marks printed on a surface of the golf ball are read from a first static image and a second static image and a rotating angle is calculated based thereon. In the measuring method, the recognition marks are read mainly manually. The reason is that it is hard to automate ~~a work~~ work for causing three recognition marks appearing on the first static image and three recognition marks appearing on the second static image to correspond to each ~~other with~~ other, one to one.

Please replace the paragraph on page 2, line 18, with the following amended paragraph:

However, the recognition mark in the above-mentioned publication is small with respect to a diameter of the golf ball and the measuring points are close to each other. Therefore, in the case in which a reading error of the measuring point is made, an error of the rotating angle which is caused by the reading error is increased. In order to prevent errors from being made, it is necessary to sufficiently increase ~~a size~~ the size of the isosceles triangle. However, if the isosceles triangle is large, a part of the isosceles triangle is not photographed on the static image if the sidespin is applied. Consequently, there is a problem in that it is impossible to measure the rotating angle due to a shortage of the measuring points, the erroneous recognition ~~of a~~ of the shape of the recognition mark and the like.

Please replace the paragraph beginning on page 2, line 32 with the following amended paragraph:

In consideration of such problems, it is an object of the present invention to provide a method of measuring ~~a rotation~~ the rotation of a sphere in which the rotation can be measured automatically and the measurement can be mostly carried out even if the rotation is performed in a plurality of directions.

Moreover, it is another object of the present invention to provide a measuring device to be used for the measuring method.

Please replace the paragraph beginning on page 3, line 7, with the following amended paragraph:

A measuring method according to the present invention comprises the steps of:

photographing a flying sphere having the recognition mark printed thereon twice at a predetermined time interval; and

calculating ~~an~~ the amount of a rotation of the sphere through an image processing based on recognition marks of two static images obtained by the photographing.

Please replace the three paragraphs beginning on page 3, line 23 to page 4, line 17 with the following three amended paragraphs:

In the present invention, the central mark has a directivity. Therefore, the information about directions of the surface of the golf ball are obtained from the central mark through the image processing. By using the information about directions, the three or more rotating angle calculating marks are distinguished from each other based on the positional relationship with the central mark. Accordingly, the respective rotating angle calculating marks are caused to correspond to

each other with one to one between a first static image and a second static image. Therefore, the rotating angle can be calculated automatically through ~~the image~~ image processing. In addition, the three or more rotating angle calculating marks are provided. Therefore, also in the case in which a sidespin is slightly applied, there is a high possibility that at least two of the rotating angle calculating marks might remain on the static images and there is a low possibility that the rotating angle cannot be measured.

It is preferable that respective center positions of the rotating angle calculating marks should be present in a region provided apart from a center position of the central mark by 13 mm to 17 mm. Consequently, the measurement can be more significantly prevented from being disabled due to ~~a sidespin and~~ sidespin and the precision in the measurement of the rotating angle can be enhanced.

It is preferable that the central mark should be constituted by a rectangle and a circle provided apart from the rectangle ~~adjacently~~ adjacent to one of short sides of the rectangle. The central mark is constituted by a combination of comparatively simple shapes. Therefore, it is easy to recognize the shape through ~~the~~ image processing. Accordingly, the precision in the recognition of the position of the central mark and the information about directions can be enhanced.